

(1) Publication number: 0 532 228 A3

## (12)

## **EUROPEAN PATENT APPLICATION**

(21) Application number: 92308000.6

(51) Int. Cl.<sup>5</sup>: **H04L 9/32**, H04L 9/06

22) Date of filing: 03.09.92

30 Priority: 13.09.91 US 759309

(3) Date of publication of application: 17.03.93 Bulletin 93/11

Ø Designated Contracting States : DE FR GB SE

(88) Date of deferred publication of search report: 13.04.94 Bulletin 94/15

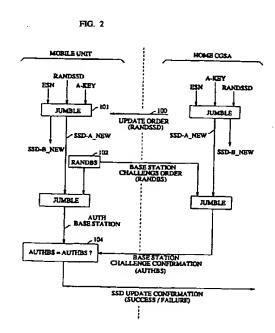
(1) Applicant: AMERICAN TELEPHONE AND TELEGRAPH COMPANY
32 Avenue of the Americas
New York, NY 10013-2412 (US)

(2) Inventor: Reeds III, James Alexander 127 Southgate Road New Providence, New Jersey 07974 (US)

(4) Representative: Buckley, Christopher Simon Thirsk et al AT & T (UK) LTD., AT & T Intellectual Property Division, 5 Mornington Road Woodford Green, Essex IG8 0TU (GB)

## (54) A cryptosystem for cellular telephony.

A relatively secure, self-inverting, symmetric key cryptosystem designed for efficient implementation on an 8-bit microcomputer. The cryptosystem is especially well suited use in cellular telephony. The method of encryption is comprised of three stages: 1) an autokeyed encryption, 2) the use of a one-time pad encryption where the key is derived from a portion of the message as encrypted by the fist stage, and 3) a second autokeyed decryption that is the inverse of the fist.





## **EUROPEAN SEARCH REPORT**

Application Number EP 92 30 8000

DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document with indication, where appropriate, Releva			Relevant	CLASSIFICATION OF THE
atogery	of relevant pass		to chaim	APPLICATION (bLCL.5)
(	EP-A-0 105 553 (STAA * page 4, line 11 -	T DER NEDERLANDEN) line 20 *	1,12	H04L9/32 H04L9/06
D,A	pages 397 - 427 W.DIFFIE ET AL 'PRIV AUTHENTICATION: AN I CRYPTOGRAPHY'	ch 1979 , NEW YORK US ACY AND	2,13	
				TECHNICAL FIELDS SEARCHED (Int.Cl.5)
				H04L
	The present search report has bee		1	Permitter
Place of search THE HAGUE		Date of completion of the search  14 February 1994	HAI	per, G
X : part Y : part doc	CATEGORY OF CITED DOCUMENT icularly relevant if taken alone icularly relevant if combined with anoth ment of the same category motogical background	T: theory or princi E: earlier patent 4	ple underlying the consent, but publishe in the application	invention lished ca, or

ro rokra ism miz (i